

## ABSTRACT

A method for enabling bitwise or bit slice constraints to be provided as part of the test generation process, by providing a language structure which enables these constraints to be expressed in a test generation language such as *e* code for example. The language structure for such bitwise constraints is then handled in a more flexible manner, such that the test generation process does not attempt to rigidly “solve” the expression containing the constraint as a function. Therefore, the propagation of constraints in such a structure do not necessarily need to be propagated from left to right, but instead are generated in a multi-directional manner. The language structure is particularly suitable for such operators as “[ : ]”, “|”, “&”, “^”, “~”, “>>” and “<<”.